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group as *sui generis* and incapable of being brought within any classification of living plants, inclines to see its nearest affinities in the Lycopodiaceæ; that of all the different views that have been held as to the affinities of *Spirangium* he regards that of Nathorst as the most attractive, viz., that it may represent the gigantic sporangia of *Chara* surrounded by spirally twisted envelope-tubes; and that he leans to the conclusion that *Williamsonia* belongs to the Cycadaceæ, or to some analogous type of vegetation.

The most serious charge that must be made against this English edition is that it has not been revised to date. No science is progressing more rapidly than paleophytology, and the department that is advancing the fastest is our knowledge of just such problematical forms as those considered in this work. In making a translation it would have been easy to introduce the result of the investigations of the last four years, and the value of these results would have been very great to the class who are certain to make the most use of the work. But although it is said to be an authorized edition, it seems to be nothing more than an exact translation of the German edition of 1887.

For, example, nothing new is presented in relation to Bennettites, on which the author has been so long engaged. On page 97 the remark of the original edition that "the sketch here given of Bennettites, which I hope to make more complete at some future time," etc., is repeated without modification. But the "future time" came more than a year ago, and the Count's able researches on this form were published in the *Botanische Zeitung* for 1890 and noticed by the present writer in the *American Journal of Science* for April, 1891, p. 331. Still later the interesting specimen from Golden, Col., which Lesquereux called *Zamiostrobus mirabilis*, has been sent to him, and he has made sections of it and referred it to the same genus, which he now properly calls by Buckland's earlier name, *Cycadeoidea*. All this new matter should have been incorporated in the English edition.

We are never sure that we have the author's present opinion on the most problematical forms. Nothing is said of the recent discoveries of Zeiller, Saporta, and others respecting *Spirangium* and *Fayolia*, from which these authors are now disposed to give them over entirely to the zoologists as probably of animal origin. We should be glad to know what the successor of De Bary thinks of this. And it is amusing to read on page 371, where *Williamsonia* is under discussion and the early views of Saporta and Marion are considered, to learn that "it is hoped that a publication yet to come from Saporta will contain further and more convincing particulars on this subject." Paleobotanists have been familiar for at least three years with the "publication" referred to, as it appears in the "Paléontologie française, Plantes jurassiques," Livraisons 36-39, pp. 87-191, where the subject has received the most exhaustive treatment yet given to it, illustrated by seventeen plates. What we want to know is whether the professor of botany at the University of Strasburg agrees with the conclusion of the Marquis Saporta that the *Williamsonias*, without being precisely *Pandaneæ*, may have had a genetic relationship with that family (op. cit., p. 117). Solms Laubach's own conclusion, quoted above is given without the knowledge of Saporta's work, which might have modified it. It is also given without acquaintance with the important discovery by Nathorst of the inflorescence of *Williamsonia augustifolia* attached to the stems and foliage of *Anomozamites minor*, a supposed cycadean plant,¹ and although this is confirmatory of the views above expressed, it would be interesting to know to what extent he regards it as conclusive; and, in general it would be very useful to know what this author's attitude now is toward Saporta's views as here expressed (op. cit., pp. 229-236), according to which not only *Williamsonia*, *Weltrichia*, and *Goniolina*, but *Cycadeoidea*, *Anomozamites*, and other forms hitherto uniformly referred to the Cycadaceæ, are taken entirely out of the Gymnosperms and assimilated to the angiospermous orders *Balanophoreæ* and *Pandaneæ*, and are grouped under his new and extinct class of *Proangiosperms*.

The *Sphenoglossum quadrifoliatum* of Emmons,² twice men-

tioned,³ was carefully considered in 1883 by Professor Fontaine, and referred doubtfully to *Actinopteris*, a genus of ferns, in a work with which the author should have been acquainted,⁴ and in treating the Cycadaceæ in this volume, as well as in his later studies of the Portland Cycadeoideæ, he seems to be equally unfamiliar with the important cycadean trunks discovered by Tyson in 1860 in the iron ore beds of the Potomac formation of Maryland, and described also by Professor Fontaine in his great monograph of the flora of that formation.⁵

The "forty-nine illustrations" so prominently mentioned on the title-page as a high recommendation are indeed excellent and largely the author's own, but in view of the uses to which this work is likely to be put, as explained above, this number is obviously far too small. To have secured the maximum usefulness, even to the small class to whom it is adapted, several times that number would have been required.

The English publishers have left nothing undone to render the volume handsome and attractive, and as usual, where the publisher's point of view is alone followed, the convenience of the reader and user is often sacrificed to style and appearance. This is notably the case, and applies to the German edition as well, in the avoidance of italics. It may be admitted that the printing of all words having the Latin form in italics produces, in works of this class, a very unseemly effect, but the compromise which limits them to strict binomials, i.e., cases in which the species requires to be mentioned, reduces this evil from the esthetic point of view to a degree which is many times counterbalanced by the increased value which it gives to a work that is to be in constant use by busy students, who in nine cases out of ten are looking for some particular name. To compel this class to pore over a whole page for what, if italicized, would instantly catch the eye, is a positive cruelty to a deserving animal, and should be prohibited by penal enactment.

The placing of the references to the appendix to the literature in foot-notes at the bottom of the pages is a decided improvement from all points of view over the unsightly microscopic superior figures in the German edition, and perhaps in a work like this, where the same memoirs are frequently several times referred to, this general plan is upon the whole justifiable, but after all nothing is so simple, easy, and clear as the old way, in which the reader finds all he wants in foot-notes on the page he is reading, and this simplicity, ease, and clearness usually atone for considerable repetition as well as for whatever offence these foot-notes may give to the most fastidious eye.

If, from all that has been said, it should appear to any that the work before us consists entirely of a bundle of defects, let him hasten to divest himself of so false an impression. It is rather our purpose to point out these defects than to extol its excellencies, and should the latter be attempted it would require much more space than has been needed for the former task.

LESTER F. WARD.

AMONG THE PUBLISHERS.

THE Century Company is about to publish, in cheap tract form, the editorials on "Cheap Money Experiments" which have been appearing in *The Century*.

—Houghton, Mifflin & Co. will issue early next year John Fiske's work on "The Discovery of America." It has involved a vast amount of research, and Mr. Fiske is reported to regard these two volumes as his most important contribution to American history.

—In "The Platform: Its Rise and Progress," Mr. Henry Jephson, private secretary to Mr. Forster and Sir G. Trevelyan, beginning with the days when an open meeting for discussion of public affairs was condemned as scarcely less than overt treason, traces the slow growth of political speech making and analyzes the ele-

¹ Ibid, pp. 182 and 315.

² "Contributions to the Knowledge of the Older Mesozoic Flora of Virginia." By William Morris Fontaine. Monographs of the U. S. Geological Survey, Vol. VI., Washington, 1883, p. 120.

³ "The Potomac or Younger Mesozoic Flora." By William Morris Fontaine. Monographs of the U. S. Geological Survey, Vol. XV., Washington, 1889. Text, pp. 186-193; Atlas, pl. clxxiv-clxxx.

¹ Oversigt af Kongl. Vetenskaps-Akademiens Förhandlingar, June, 1888. No. 6.

² "American Geology," Vol. VI., p. 134, pl. v., fig. 2.

ments in its development. The open-air meetings of the Wesleyan revivalists had their share; the old right of petition to the crown for redress of any grievance, and the occasional waves of popular clamor gave it a fitful existence until, at the time of the so called "Wilkes Rebellion," it first became an organized political engine, then and since acting as a perpetual check upon the party in power. To the student of politics this book should prove of great value and interest. It will be published by Macmillan & Co. early in January.

— Frederick Warne & Co., New York, will shortly issue at a popular price "Electricity up to Date for Light, Power, and Traction," clearly explained, with diagrams, etc., for non-scientific readers, by John B. Verity, M.Inst.E.E. (London). The same firm will shortly publish the new volume of "Barker's Facts and Figures for the Year 1892," edited by Thomas Whittaker, containing a large amount of information relating to commerce, government, insurance, agriculture, population, education, finance, health, wealth, religion, railways, etc., with special reference to those matters which concern the inhabitants of Great Britain.

— A "General Encyclopedia of the History and Science of the Jews" has been undertaken by J. Singer, in Paris, and will comprise twelve large volumes, according to *The New York Tribune*. The author hopes to present the main facts of Jewish history, and

to show the effects of the Jewish race upon the various factors of civilization, science, literature, commerce, industry, etc. The work will not be finished for some time.

— The trustees of the British Museum, we learn from *The Publishers' Weekly*, will shortly issue the second instalment of Dr. Bezold's "Catalogue of the Cuneiform Tablets in the Kouyunjik Collection." This volume will contain the descriptions of nearly six thousand tablets and fragments which formed part of the famous clay library preserved by the kings of Assyria at Nineveh. This library was founded by Assurbanipal, B.C. 668-626, and contained official documents which had been sent to Sargon and Sennacherib by the generals of the army and others, as well as a series of works relating to every branch of science known to the Assyrians, and copies of ancient classical books and legends from Babylonia. In this volume will be found a classification of omen, and astrological texts; a work which has never before been attempted; and a considerable number of important extracts are printed in the cuneiform characters.

— Hubert Howe Bancroft, who is spending the winter with his family in the City of Mexico, has been requested by Gen. Porfirio Diaz, President of the Republic of Mexico, to write a book on the resources and development of Mexico, to be published in Spanish and in English, and to be a true and vivid representation of industrial Mexico as it exists to-day, primarily for presentation at the

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Chemical Society, Washington.

Dec. 10.—H. W. Wiley and W. H. Krug, On so called Floridite; T. M. Chatard, Notes on Analysis of Phosphate Rocks; I. T. Davis, Meat Preservatives; W. F. Hillebrand and Wm. H. Melville, On the Isomorphism and Composition of Thorium and Uranous Sulphates; a paper on Midzu Ame is proposed for the meeting of Jan. 14, 1892.

Biological Society, Washington.

Geo. Marx, On the Structure and Construction of the Geometric Spider Web; Chas. D. White, Some Peculiar Forms in an Upland Carboniferous Flora; F. H. Knowlton, Fruiting Ferns from the Laramie Group; Frederick V. Coville, Review of Kuntze's *Revisio Generum Plantarum*; C. W. Stiles, Notes on Parasites: *Spiroptera scutata*.

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— The geographical collection made by the Department of Geography of the Brooklyn Institute during the years 1889 and 1890, and very greatly increased in value and completeness, will be exhibited in the Natural History Building in Central Park, New York, at Fifth Avenue and Sixty-fourth Street, for six weeks, beginning on Dec. 24, at nine o'clock. The exhibition will occupy the two main floors of the building, and will be open free to the public from 9 A.M. to 6 P.M., on six days in the week, and until ten o'clock on Wednesday and Saturday evenings. The exhibition is given at this time in order to afford teachers, superintendents, and all others interested in education from all parts of the country, to visit and study the collection during the holidays, when the schools are not in session. The exhibition is made under the auspices of the New York Teachers' Association, which defrays all the incidental expenses. The Board of Park Commissioners of New York have generously contributed the use of the Museum Building.

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